



A.D. 1854 N° 728.

SPECIFICATION

OF

WILLIAM TUCKER AND WILLIAM ADAMS.

CONSTRUCTION OF FLUES AND SHAFTS
OF FURNACES, &c.

LONDON:

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1854.



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Construction of Flues and Shafts of Furnaces, &c.

(This Invention received Provisional Protection, but notice to proceed with the application for Letters Patent was not given within the time prescribed by the Act.)

PROVISIONAL SPECIFICATION left by William Tucker and William Adams at the Office of the Commissioners of Patents, with their Petition, on the 30th March 1854.

We, WILLIAM TUCKER, of Old Brompton, and WILLIAM ADAMS, of Kensington, both in the County of Middlesex, do hereby declare the nature of the said Invention for “PREVENTING THE ESCAPE OF FULIGINOUS SMOKE FROM SHAFTS AND FLUES” to be as follows (that is to say):—

Our said Invention has reference to constructing flues and shafts adapted to furnaces and fire-places of all descriptions, in such manner and in connection
10 with such machinery or apparatus that the smoke passing through the said flues may escape in a state of extreme tenuity, and purified from all fuliginous particles by which the surrounding atmosphere might be contaminated; and the manner in which we propose to carry out the aforesaid objects is as follows:—

15 We construct a series of flues or shafts of any convenient number, communicating with each other by the upper and lower portions alternately, and under the lower part of each flue, where it communicates with the next, we place a fan wheel or blower, which we cause to revolve by any suitable contrivance, and under each such fan wheel we place a tank, and cause every such tank
20 to be supplied with water from a feed pipe, and furnished with perforations

Tucker & Adams' Impts. for Preventing Escape of Smoke from Shafts & Flues.

through which the said water may gradually percolate or escape, and the said tanks are made to communicate with each other, and the last of the series is furnished with a discharge pipe, by which the surplus water may be carried off as required. The action of the machinery or apparatus is as follows:—The smoke, after ascending the first flue and descending the second, impinges on 5 the curved blades of the revolving fan or blower, by which it is driven down into the tank underneath, where it leaves in the water a portion of its fuliginous particles, and ascends, thus clarified, into the third flue, and the above process is repeated until the smoke is purified of all its fuliginous particles, and is allowed to escape into the atmosphere in the form of a thin 10 semi-transparent vapor; and in proportion as the water in the tanks becomes saturated with the fuliginous particles so as to be rendered unfit for use, it is carried off by the communications between the tank and the discharge pipe above mentioned, while a proportionate supply of fresh water is maintained by the feed pipe. 15

We claim the general arrangement of flues or shafts, and of machinery or apparatus in connexion therewith, in the manner and for the purposes above set forth and described.

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